

**TABLE 6**

**Comparison of 1994 Reserve Deficit: RBOC vs FCC**

**Deficit under RBOC's Proposed Life and Salvage Values vs FCC's Prescribed Values.**

(All values in \$000's)

	<b>Company Proposal</b>	<b>FCC Prescribed</b>	<b>Difference Between Two Measures \$</b>
Gross Book Value of Plant (1/1/94)	200,052,185	200,052,185	0
Cummulative Depreciation Reserve	83,521,216	83,521,216	0
<b>Net Book Value of Plant (NBV)</b>	<b>116,530,968</b>	<b>116,530,968</b>	<b>0</b>
Cummulative Depreciation Reserve	83,521,216	83,521,216	0
Theoretical Reserve	88,565,937	86,682,780	1,883,157
<b>Reserve Deficit</b>	<b>(5,044,720)</b>	<b>(3,161,563)</b>	<b>(1,883,157)</b>
<b>Reserve Deficit as % of NBV</b>	<b>-4.33%</b>	<b>-2.71%</b>	<b>-1.62%</b>

Sources: FCC Prescribed life and salvage values are from the 1994 Theoretical Reserve Study (TRS) filed by each RBOC with FCC. The company proposed life and salvage values are from the company proposal filed by each RBOC with its triennial depreciation study at the FCC. Plant investment and reserves are from the 1994 TRS.

Notes: Because for some RBOC states, both company proposed and FCC prescribed life and salvage values were not available, a small number of states' accounts had to be excluded from the analysis.

**TABLE 7****Comparison of 1994 Reserve Deficit: RBOC vs FCC  
RBOC Study Areas Represcribed in 1994**

**Deficit under RBOC's Proposed Life and Salvage Values vs FCC's Prescribed Values.**  
(All values in \$000's)

	<b>Company Proposal</b>	<b>FCC Prescribed</b>	<b>Difference Between Two Measures \$</b>
Gross Book Value of Plant (1/1/94)	52,535,929	52,535,929	0
Cummulative Depreciation Reserve	21,272,035	21,272,035	0
<b>Net Book Value of Plant (NBV)</b>	<b>31,263,895</b>	<b>31,263,895</b>	<b>0</b>
Cummulative Depreciation Reserve	21,272,035	21,272,035	0
Theoretical Reserve	24,779,079	23,636,365	1,142,714
<b>Reserve Deficit</b>	<b>(3,507,045)</b>	<b>(2,364,330)</b>	<b>(1,142,714)</b>
<b>Reserve Deficit as % of NBV</b>	<b>-11.22%</b>	<b>-7.56%</b>	<b>-3.66%</b>

Sources: FCC Prescribed life and salvage values are from the 1994 Theoretical Reserve Study (TRS) filed by each RBOC with FCC. The company proposed life and salvage values are from the company proposal filed by each RBOC with its triennial depreciation study for the FCC. Plant investment and reserves are from the 1994 TRS.

Note: Because for some RBOC states, both company proposed and FCC prescribed life and salvage values were not available, a small number of states' accounts had to be excluded from the analysis.

**TABLE 8**

**1995 Reserve Deficit  
RBOC Study Areas Represcribed in 1995**

**Deficit under RBOC's Proposed Life and Salvage Values vs FCC's Prescribed Values.**  
(All values in \$000's)

	<b>Company Proposal</b>	<b>FCC Prescribed</b>	<b>Difference Between Two Measures \$</b>
Gross Book Value of Plant (1/1/95)	104,024,512	104,024,512	0
Cummulative Depreciation Reserve	46,016,574	46,016,574	0
<b>Net Book Value of Plant (NBV)</b>	<b>58,007,938</b>	<b>58,007,938</b>	<b>0</b>
Cummulative Depreciation Reserve	46,016,574	46,016,574	0
Theoretical Reserve	52,391,616	48,091,233	4,300,382
<b>Reserve Deficit</b>	<b>(6,375,042)</b>	<b>(2,074,659)</b>	<b>(4,300,382)</b>
<b>Reserve Deficit as % of NBV</b>	<b>-10.99%</b>	<b>-3.58%</b>	<b>-7.41%</b>
<b>Metallic Cable*</b>			
Reserve Deficit	(3,575,859)	(1,110,046)	(2,465,813)
Net Book Value of Plant (NBV)	16,041,317	16,041,317	0
<b>Reserve Deficit as % of NBV</b>	<b>-22.29%</b>	<b>-6.92%</b>	<b>-15.37%</b>

Sources: FCC Prescribed life and salvage values are from the 1995 Depreciation Study filed by each RBOC with FCC. The company proposed life and salvage values are from the company proposal filed by each RBOC with its triennial depreciation study for the FCC. Plant investment and reserves are from the 1995 Depreciation Study, 2/3 Way Agreement. Only plant accounts with non-zero investment and life parameters have been included in the above table.

Notes: Metallic cable includes accounts 2421 (Aerial Cable), 2422 (Underground Cable), 2423 (Buried Cable), and 2424 (Submarine Cable). If a LEC did not separate metallic cable from non-metallic cable, it was excluded from the metallic cable category. The reserve deficit for accounts 2421-2424 on both metallic and non-metallic cable is \$1,246,873,363 (FCC Prescribed) and \$4,101,759,470 (Company Proposals).

companies' proposals to the FCC prescribed reserve deficit is a measure of how divergent the RBOCs' views of the future are from the FCC's. Whereas for the sample of all RBOC states represcribed from 1992-1994 (Table 6) this ratio was 1.6; for the sample of RBOC states represcribed in 1994 (Table 7), it fell to 1.48.<sup>23</sup> Thus, during 1994, the RBOCs' and FCC's views of the future seemed to be converging slightly. However, for the RBOC states represcribed in 1995, this ratio increased to 3.07, indicating a dramatic change in the two groups views of the future.

It is therefore important to understand the difference between the RBOC and FCC views on appropriate depreciation. It will turn out that most of the difference in their views is associated with different assumptions about when to replace metallic cable, and especially subscriber metallic cable.

### Subscriber Metallic Cable

A very important issue for depreciation policy is the treatment of subscriber metallic cable. According to a recent Oregon study of costing based on forward-looking technology, copper is always the least-cost technology for the distribution loop and, in most cases, for the feeder portions of the subscriber loop as well.<sup>24</sup> This would imply that the RBOCs' interest in replacing

---

<sup>23</sup>If one compares the RBOC-proposed and FCC-prescribed reserve deficits across years, limiting the comparison to the RBOC operative represcribed in that year, the ratios are 2.20, 2.23, 1.48 and 3.07 for 1992-95, respectively.

<sup>24</sup>"Telecommunications Building Block--Cost Report." Oregon Public Utility Commission workshop paper dated July 1993, vol 2, section 4, p. 3. The Oregon study found that in 75% of cases a copper distribution and copper feeder loop was the least-cost technology, and in 25% of

copper with fiber for remaining portions of the subscriber loop may well be related to a desire to provide other services, not to cost-efficiently provide basic local service on the most efficient basis. Therefore, it would be interesting to know two things: first, how much of the difference between the reserve deficit based on RBOC and FCC parameter assumptions is due to differences in the treatment of subscriber metallic cable? And second, for the estimates based on FCC parameter assumptions, how much of the deficit is due to subscriber metallic cable?<sup>25</sup>

Only three RBOCs break out metallic cable accounts into subscriber and interoffice categories in their depreciation studies. These three RBOCs account for two-thirds of the 1994 reserve deficit for all RBOCs, calculated using FCC parameter assumptions. For the three RBOCs, Tables 9, 10, 11 and 12 show the reserve deficit overall and the portion due to subscriber

---

cases a copper distribution loop and fiber feeder loop was the least-cost technology for a subscriber loop carrier system.

<sup>25</sup>The second question is important because FCC cross-subsidy "protections" will, in some cases, legitimize gross cross-subsidy. If RBOCs are actually replacing, or have bona fide plans to replace, subscriber metallic cable with fiber, FCC accounting procedures can legitimize cross-subsidy. Under current FCC policy, the costs of shared resources (such as subscriber loop) are apportioned among services by relative use. Although the tariff rules for video dial tone (VDT) service (fiber to the home) have not been finalized yet, the tentative findings of the FCC are that VDT service will be subject to the new services test, with a share (to be determined in the future) of installation, excess capacity and overhead costs born by telephony customers (CC Docket No. 87-266). In VDT filings by SNET for Connecticut and Bell Atlantic for NJ, these companies have proposed that the share allocated to telephony customers has been between 50-75%, depending on how the shares are measured. Thus, customers desiring only basic telephone service will be apportioned a part of the costs of local loop reconfiguration even though the investment does not provide them any benefits. Protection against cross-subsidy requires that basic service customers pay no more than the costs of the existing system with in-place metallic subscriber cable. Since FCC policy subsidizes installation of fiber on the subscriber portion of the local loop, the actual practice or investment plans of the RBOCs will likely include more subscriber metallic cable replacement than is appropriate. As a result, the current depreciation deficit based on FCC parameters may well overstate the true deficit in a subsidy-free environment.

**TABLE 9**

**1994 Reserve Deficit for Metallic Cable Accounts: Subscriber vs. Interoffice:  
(Based Upon FCC Prescribed Values)**

For subset of RBOCs that separately report subscriber & interoffice investment.\*

(All values are in \$000's)

	<b>Metallic Cable Accounts</b>				<b>Total</b>
	<b>AERIAL</b>	<b>UNDERGND</b>	<b>BURIED</b>	<b>SUBMARINE</b>	
	<b>2421</b>	<b>2422</b>	<b>2423</b>	<b>2424</b>	
<b>Gross Book Value of Plant</b>					
<b>Subscriber</b>	7,184,810	6,374,606	8,622,045	5,584	22,187,045
<b>Interoffice</b>	173,044	810,150	330,711	1,983	1,315,887
<b>Depreciation Reserve</b>					
<b>Subscriber</b>	3,350,069	2,870,434	3,936,890	4,428	10,161,821
<b>Interoffice</b>	144,315	608,950	209,936	1,430	964,632
<b>Theoretical Reserve</b>					
<b>Subscriber</b>	3,647,868	3,220,319	3,710,771	4,114	10,583,072
<b>Interoffice</b>	167,799	748,904	245,555	1,490	1,163,748
<b>Reserve Deficit</b>					
<b>Subscriber</b>	(297,799)	(349,885)	226,119	314	(421,251)
<b>Interoffice</b>	(23,483)	(139,955)	(35,619)	(59)	(199,116)

Sources: 1994 Theoretical Reserve Study filed by each RBOC with the FCC.

\*Above table based on metallic cable accounts from the following RBOCs: NYNEX (2421, 22,23), Pacific Telesis (2421, 22, 23), Southwestern Bell (2422, 23), New England Bell (2424).

**TABLE 10**

**1994 Reserve Deficit for Metallic Cable Accounts: Subscriber vs. Interoffice.  
(Based Upon Company Proposals)**

For subset of RBOCs that separately report subscriber & interoffice investment.\*

(All values are in \$000's)

	<b>Metallic Cable Accounts</b>				<b>Total</b>
	<b>AERIAL</b>	<b>UNDERGND</b>	<b>BURIED</b>	<b>SUBMARINE</b>	
	<b>2421</b>	<b>2422</b>	<b>2423</b>	<b>2424</b>	
<b>Gross Book Value of Plant</b>					
Subscriber	7,184,810	6,374,606	8,622,045	5,584	22,187,045
Interoffice	173,044	810,150	330,711	1,983	1,315,887
<b>Depreciation Reserve</b>					
Subscriber	3,350,069	2,870,434	3,936,890	4,428	10,161,821
Interoffice	144,315	608,950	209,936	1,430	964,632
<b>Theoretical Reserve</b>					
Subscriber	3,911,199	3,772,480	3,543,210	4,114	11,231,003
Interoffice	164,066	698,734	245,465	1,490	1,109,755
<b>Reserve Deficit</b>					
Subscriber	(561,130)	(902,046)	393,681	314	(1,069,182)
Interoffice	(19,751)	(89,784)	(35,529)	(59)	(145,124)

Sources: 1994 Theoretical Reserve Study filed by each RBOC with the FCC.

\*Above table based on metallic cable accounts from the following RBOCs: NYNEX (2421, 22,23), Pacific Telesis (2421, 22, 23), Southwestern Bell (2422, 23), New England Bell (2424).

**TABLE 11**

**1994 Reserve Deficit for Metallic Cable Accounts: Subscriber vs. Interoffice**

**Comparison of Reserve Deficit: Company Proposals vs FCC Prescribed.**

For subset of RBOCs that separately report subscriber & interoffice investment.\*

(All values are in \$000's)

<b>Metallic Cable Accounts</b>					
	<b>AERIAL</b>	<b>UNDERGND</b>	<b>BURIED</b>	<b>SUBMARINE</b>	
	<b>2421</b>	<b>2422</b>	<b>2423</b>	<b>2424</b>	<b>Total</b>
<b>Reserve Deficit - Based on Company Proposals</b>					
Subscriber	(561,130)	(902,046)	393,681	314	(1,069,182)
Interoffice	(19,751)	(89,784)	(35,529)	(59)	(145,124)
<b>Reserve Deficit - Based on FCC Prescribed Values</b>					
Subscriber	(297,799)	(349,885)	226,119	314	(421,251)
Interoffice	(23,483)	(139,955)	(35,619)	(59)	(199,116)
<b>Difference</b>					
Subscriber	(263,331)	(552,161)	167,562	0	(647,931)
Interoffice	3,732	50,170	90	0	53,993

Sources: 1994 Theoretical Reserve Study filed by each RBOC with the FCC.

\*Above table based on metallic cable accounts from the following RBOCs: NYNEX (2421, 22,23), Pacific Telesis (2421, 22, 23), Southwestern Bell (2422, 23), New England Bell (2424).

**TABLE 12**

**Comparison of Reserve Deficit for Metallic Cable vs All Categories: 1994  
For Three RBOCs that Report Division Between Subscriber and Interoffice Cable.**

**Deficit under RBOC's Proposed Life and Salvage Values vs FCC's Prescribed Values.**  
(All values in \$000's)

	<b>Company Proposal</b>	<b>FCC Prescribed</b>	<b>Difference Between Two Measures \$</b>
<b>Overall Reserve Deficit</b>	(2,039,884)	(1,238,520)	(801,364)
<b>Reserve Deficit on Subscriber Metallic Cable*</b>	(1,069,182)	(421,251)	(647,931)
<b>Reserve Deficit Excluding Subscriber Metallic Cable</b>	(970,702)	(817,269)	(153,433)
<b>Reserve Deficit on Subscriber Metallic Cable as a Percentage of Overall Reserve Deficit</b>	52.41%	34.01%	80.85%

Sources: FCC Prescribed life and salvage values are from the 1994 Theoretical Reserve Study (TRS) filed by each RBOC with FCC. The company proposed life and salvage values are from the company proposal filed by each RBOC with its triennial depreciation study for the FCC. Plant investment and reserves are from the 1994 TRS.

Notes: Because for some RBOC states, both company proposed and FCC prescribed life and salvage values were not available, a small number of states' accounts had to be excluded from the analysis.

\*Above table based on metallic cable accounts from the following RBOCs: NYNEX (2421, 22,23), Pacific Telesis (2421, 22, 23), Southwestern Bell (2422, 23), New England Bell (2424).

metallic cable accounts for both the RBOC and FCC parameter assumptions. Table 12 summarizes the results, and it shows that over 80% of the difference between the FCC and RBOC estimates of the reserve deficit is due to differences in subscriber cable accounts. (The total difference in reserve deficit is \$801 million, and difference due to subscriber cable is \$647.9 million.) In addition, about one-third of the reserve deficit based on FCC parameter assumptions is due to subscriber cable accounts, which, given the bias toward premature replacement of metal with fiber in the subscriber loop, may well be inappropriate relative to subsidy-free, stand-alone cost criteria for local service pricing.

Table 13 presents the same information for RBOC state operations that were represcribed in 1995, and for which the reserve deficit for subscriber metallic cable can be identified. About 75% of the difference in the reserve deficit between the RBOC proposals and the FCC represcription is accounted for by differences in subscriber cable. The total difference between the two measures of the reserve deficit is \$711 million, and the difference in the reserve deficit for subscriber metallic cable is \$535 million.

The RBOCs may object that they cannot provide investment plans for replacing metallic subscriber cable with fiber given the current legal uncertainty over when and how they might be allowed to offer new services that require fiber to the home. Absent such plans, the RBOCs may claim, the FCC will not approve shorter asset lives for subscriber metallic cable than is warranted by historical retirement data. While the factual predicate for the objection is hard to argue with, the objection itself has little merit (or relationship to the policy issues set out at the beginning of this paper). In order to be free of subsidy, the price for basic service should be no more than the

**TABLE 13**

**Comparison of Reserve Deficit for Metallic Cable vs All Categories: 1995.  
For Two RBOCs that Report Division Between Subscriber and Interoffice Cable.**

**Deficit under RBOC's Proposed Life and Salvage Values vs FCC's Prescribed Values.**  
(All values in \$000's)

	<b>Company Proposal</b>	<b>FCC Prescribed</b>	<b>Difference Between Two Measures \$</b>
<b>Overall Reserve Deficit</b>	(1,418,900)	(707,866)	(711,034)
<b>Reserve Deficit on Subscriber Metallic Cable*</b>	<u>(965,834)</u>	<u>(430,339)</u>	<u>(535,495)</u>
<b>Reserve Deficit Excluding Subscriber Metallic Cable</b>	(453,065)	(277,527)	(175,538)
<b>Reserve Deficit on Subscriber Metallic Cable as a Percentage of Overall Reserve Deficit</b>	68.07%	60.79%	75.31%

Sources: Investment, reserves, prescribed service lives and net salvage from 1995 represcriptions.

Company proposed service lives and net salvage values from company proposals submitted during 1995 represcription.

\*Above table based on metallic cable accounts from the following RBOCs: NYNEX-NY only (2421, 22,23) and Southwestern Bell (2422, 23).

costs of a stand-alone network providing only basic services<sup>26</sup>. If metallic cable is to be replaced by fiber in order to more efficiently serve the RBOCs' basic telephone customers, current FCC policy would not present an obstacle. The RBOCs can simply provide an investment plan, and if that calls for faster retirement of metallic cable than historical trends would suggest, the FCC's practice would be to approve the request. If the replacement of metallic cable is largely motivated by a desire to provide new non-telephony services, the RBOCs' problem may be that they are reluctant to commit to an investment plan, given the legal uncertainty over what additional services they can sell and what rules will govern competition in the market place. But this has nothing to do with the appropriate depreciation expense for a stand-alone basic service local telephone company. To the extent replacing metal with fiber cannot be justified for basic local service, the costs of the change should be borne by customers of non-basic service. Granting larger depreciation expense today to finance early replacement of metal with fiber would require basic service customers to subsidize customers of non-basic services.<sup>27</sup>

---

<sup>26</sup>For the classic modern derivation of this proposition, see Gerald Faulhaber, "Cross-Subsidization: Pricing in Public Enterprise," *American Economic Review* 65: 966-977.

<sup>27</sup>As noted above, the subsidy would likely be exacerbated when the fiber plant is in place if the "accounting protections" against cross-subsidy adopted by the FCC in Docket 86-111 (for costs common to regulated and unregulated services) are adopted here. Docket 86-111 calls for allocation of common plant costs in proportion to relative use. VDT rules leave it up to the RBOC to propose the allocation method. It may be based on relative usage but need not be. See Docket 87-266. However, the FCC's prior acceptance of relative use allocations of common capital costs is troubling if applied to the investments necessary to enable local telephone companies to provide video dial tone and other non-basic services. This could well cause basic service customers to pay the lion's share of the capital charges for the new plant in the early years, even if the change in plant was entirely caused by the RBOCs' desire to compete in non-basic services.

### Difference Between FCC and State PUC Measures of the Book Depreciation Reserve

One limitation of estimates of the reserve deficit based upon the FCC's accounting data is that since *Louisiana PSC*, states have not been required to follow the same depreciation practices as the FCC.<sup>28</sup> Moreover, the FCC requires the RBOCs to report their book depreciation reserves to the FCC as if FCC depreciation rates had been utilized consistently throughout time for all the carrier's assets (both interstate and intrastate). If states have been setting lower depreciation rates than the FCC, the actual value of the book depreciation reserve will be lower than reported in the FCC's depreciation studies. This is especially true because roughly 75% of carriers' plant is intrastate and only 25% is interstate.

In Table 14, the extent of this potential bias is examined. The data on total (intrastate and interstate) book depreciation reserves using both the FCC and state (SPUC) reporting methods is from tables the carriers file with the depreciation studies. Because only 1/3 of the carriers file a depreciation study in any year, the most recent year with complete data for all RBOC states is 1992. As Table 14 indicates, the difference between the book depreciation reserve as reported on the FCC basis and the reserve as reported on the state basis is approximately \$4 billion dollars.<sup>29</sup> The interstate portion of the FCC book reserve for the RBOCs in 1992 was 25.31% of total reserves (ARMIS 43-01). Thus, if we adjust for the relative shares of the book reserve accounted

---

<sup>28</sup>Louisiana Public Service Commission v. FCC, 106 S. Ct. 1890 (1986).

<sup>29</sup>The numbers in Table 14 slightly understate book reserves because they are sometimes based on preliminary estimates of the depreciation reserve. The extent of this bias appears very small, however. The Statistics of Common Carriers, 1992 reports the RBOCs' book reserve in 1992 to be \$78.1 billion dollars (on the FCC basis) vs. the \$77.2 billion reported in Table 13. This is an understatement of only 1.1%.

**TABLE 14**

**FCC and State Depreciation Reserve for RBOCs -- 1992.**

---

<b><u>CUMMULATIVE DEPRECIATION RESERVE (12/31/92)</u></b>			
<b>FCC BASIS</b>	<b>STATE BASIS</b>	<b>DIFFERENCE</b>	<b>Difference Adjusted for Interstate Factor</b>
77,170,426,169	73,166,146,894	4,004,279,275	3,025,045,475

---

Sources: FCC and SPUC basis from Attachment V to depreciation studies filed by RBOCs with FCC from 1993-1995.

Note: The intrastate weight was equal to 1 minus the interstate weight of 25.31%. This overstates the influence of intrastate reserves because 1.59% of the total reserves in ARMIS is classified into categories other than interstate or intrastate.

for by interstate vs. intrastate jurisdictions, the difference between the book reserve on the FCC basis and the actual book reserve is about \$3 billion dollars, or 1.6% of the gross book value of plant.<sup>30</sup>

Given the magnitude of the difference between the book reserve as reported on the FCC vs. the state basis, it is natural to wonder whether this difference is increasing or decreasing over time. If it was increasing, this could be indirect evidence that FCC and state depreciation practices are becoming more divergent. Conversely, if the difference between the two was declining, it could indicate the converse. As Table 15 demonstrates, over the period from 1990 to 1994, the difference between the FCC and state book reserves for states represcribed in 1995 declined from \$2.2 billion to \$1.8 billion, and, as a fraction of the gross book value of plant, it declined from 2.5% to 1.7%.<sup>31</sup> Thus, the difference between the FCC and state book reserve appears to be declining over time both in absolute and relative terms.

Table 15 also illustrates that the book reserve ratio (the ratio of the book reserve to the gross book value of plant) has been increasing rapidly at both the federal and state level. From 1990 to 1994, the book reserve ratio on the FCC basis increased from 35.5% to 44.3%. On the state basis, it increased from 33.0% to 42.6%. Moreover, if one was to accept the Commission's

---

<sup>30</sup>The \$3 billion estimate may be a slight overstatement of the true difference because we have treated all reserves that are not in the interstate jurisdiction as being part of the intrastate jurisdiction. However, ARMIS 43-01 for 1992 reports that 1.59% of the RBOCs' book reserves are classified in other jurisdictions, such as non-regulated, other adjustments, or intracompany adjustments.

<sup>31</sup>Table 15 includes only the RBOC states that underwent represcription in 1995 because these are the only states for which complete data was available for the period from 1990-1994. These states account for over 50% of the gross book value of total RBOC plant.

**TABLE 15**

**Trends in FCC and State Depreciation Reserves.**

	<u>Gross Book Value</u>	<u>Cummulative Depreciation Reserve</u>				<u>Book Reserve Ratio</u>		
		FCC	STATE	DIFFERENCE		FCC	SPUC	Difference
				(\$)	% of GBV	(MR BASIS)	(SR BASIS)	
<b>12/94</b>	104,706,869,427	46,365,118,124	44,559,652,017	1,805,466,107	1.72%	44.3%	42.6%	1.7%
<b>12/92</b>	97,791,248,193	39,335,466,130	37,153,545,750	2,181,920,380	2.23%	40.2%	38.0%	2.2%
<b>12/90</b>	89,889,498,957	31,886,333,032	29,650,477,796	2,235,855,236	2.49%	35.5%	33.0%	2.5%

Note: Above table is for RBOC states that were represcribed in 1995.

viewpoint in Depreciation Simplification that a reserve ratio of 42% was satisfactory, then both reserve levels at both the federal and state level in 1994 would satisfy that benchmark.<sup>32</sup> These trends indicate a similarity in the effects of both federal and state depreciation policy, with both leading to a rapid increase in depreciation reserves during the early 1990's.

#### Comparison of the Theoretical Reserve Deficit with the RBOCs' Write Downs

Several RBOCs have taken write-downs on their financial books to reflect alleged concerns that certain assets may have book values exceeding true market value because of inadequate past depreciation and regulation-imposed service lives that are unrealistically long. These RBOCs argue that the write-downs are necessary to warn investors of the likelihood that changing regulatory and market conditions may make it impossible for the RBOCs to fully recover their fixed investment. The RBOCs are not proposing write-downs or write-offs on their regulatory books, nor are they proposing to actually retire the "impaired" assets now. Nonetheless, it is interesting to compare the service lives from the RBOCs' financial statements with the service lives they proposed to the FCC in their most recent depreciation represcription. Tables 16, 17, 18, 19, and 20 show the comparisons for Ameritech, Bell Atlantic, BellSouth, NYNEX, and US West.

The service lives proposed to the FCC by three of the five RBOCs are very close to the service lives they list in their financial restatements, with the exception that the companies have

---

<sup>32</sup>Simplification of the Depreciation Prescription Process, Report and Order, (1993), p. 8045, ft 86.

**TABLE 16****Comparison of Average Service Life Reported on Ameritech's Financial Statements with its Company Proposals to FCC.**

<b>Plant Account</b>	<b>Title</b>	<b>1994 AMERITECH ANNUAL REPORT</b>	<b>1995 AMERITECH COMPANY PROPOSALS</b>	<b>1994 AMERITECH COMPANY PROPOSALS</b>	<b>1992-94 AMERITECH COMPANY PROPOSALS</b>
2212	Digital Switch	7	11.7	15.1	13.3
2232	Circuit Accounts	7	9.8	10.1	10.0
2421-6	Copper & Fiber Cable	15	19.7	20.2	20.5

Note: Average service life from company proposals is a weighted average over all Ameritech states, with investment (as of 1/1/94) as the weights. Ameritech states and the year of their company proposals are as follows: 1994 (IL), 1993 (OH), 1992 (IN, MI, WI). Copper and fiber cable includes the following plant accounts 2421, 2422, 2423, 2424, 2426 (but not 2425).

TABLE 17

**Comparison of Average Service Life Reported on Bell Atlantic's Financial Statements with its Company Proposals to FCC.**

<b>Plant Account</b>	<b>Title</b>	<b>1994 BELL ATLANTIC ANNUAL REPORT</b>	<b>1995 BELL ATLANTIC COMPANY PROPOSALS</b>	<b>1994 BELL ATLANTIC COMPANY PROPOSALS</b>	<b>1992-94 BELL ATLANTIC COMPANY PROPOSALS</b>
2121	Buildings	18-40	39.7	41.9	40
2212	Digital Switch	12	13.3	13.0	14.1
2232	Digital Circuit	9-11	10.2	10.1	10.1
2441	Conduit	50	46.5	48.8	52.2
	Copper Cable	14-19	19.3	19.9	19.9
	Fiber Cable	20-25	18.6	21.0	21.0

Note: Average service life from company proposals is a weighted average over all Bell Atlantic states, with investment as the weights. Bell Atlantic states and the year of their company proposals are as follows: 1994 (NJ, DE), 1993 (VA, WV), 1992 (MD, DC, PA). Only NJ and DE separate copper from fiber in their cable plant accounts. Consequently, the copper and fiber numbers in the above table are for those two states only. Cable accounts 2421, 2422, 2423, & 2426 were used in the above table.

**TABLE 18****Comparison of Average Service Life Reported on BellSouth's Financial Statements with Its Company Proposals to FCC.**

<b>Plant Account</b>	<b>Title</b>	<b>1995 BELLSOUTH PRESS RELEASE</b>	<b>1995 BELLSOUTH COMPANY PROPOSALS</b>	<b>1993 BELLSOUTH COMPANY PROPOSALS</b>	<b>1992-93 BELLSOUTH COMPANY PROPOSALS</b>
2212	Digital Switching	10	9.7	14.1	12.4
2232	Circuit—Other	9.1	9.1	9.0	8.9
2421	Aerial Metallic Cable	14	14.5	16.2	15.6
2422	Underground Metallic Cable	12	16.5	17.4	17.0
2423	Buried Metallic Cable	14	14.5	16.6	15.9

Note: Average service life from company proposals is a weighted average over all BellSouth states, with investment (as of 1/1/94) as the weights. BellSouth states and the year of their company proposals are as follows: 1993 (AL,KY,LA,MS,TN), 1992 (FL,GA,NC,SC). No BellSouth states were represented in 1994.

**TABLE 19****Comparison of Average Service Life Reported on NYNEX's Financial Statements with its Company Proposals to FCC.**

<b>Plant Account</b>	<b>Title</b>	<b>1995 NYNEX PRESS RELEASE</b>	<b>1995 NYNEX COMPANY PROPOSALS</b>	<b>1994 NYNEX COMPANY PROPOSALS</b>
<b>2212</b>	<b>Digital Switching</b>	<b>12</b>	<b>13.9</b>	<b>12.5</b>
<b>2232</b>	<b>Circuit—Other</b>	<b>8</b>	<b>10.2</b>	<b>10.3</b>
<b>2421</b>	<b>Aerial Metallic Cable</b>	<b>17</b>	<b>17.9</b>	<b>16.7</b>
<b>2422</b>	<b>Underground Metallic Cable</b>	<b>15</b>	<b>25.3</b>	<b>15.4</b>
<b>2423</b>	<b>Buried Metallic Cable</b>	<b>17</b>	<b>19.7</b>	<b>19.3</b>
	<b>Fiber</b>	<b>20</b>	<b>19.4</b>	<b>22.6</b>

Note: Average service life from company proposals is a weighted average over all NYNEX states, with investment as the weights. NYNEX states and the year of their company proposals are as follows: 1995 (NY), 1994 (ME,MA,NH,RI,VT). The company proposals for 1994 were included in NYNEX's 1994 Theoretical Reserve Study submission to the FCC. The category, Fiber, encompasses plant accounts 2421, 2422, 2423, 2424, & 2426.

**TABLE 20****Comparison of Average Service Life Reported on US West's Financial Statements with its Company Proposals to FCC.**

<b>Plant Account</b>	<b>Title</b>	<b>1993 US WEST ANNUAL REPORT</b>	<b>1995 US WEST COMPANY PROPOSALS</b>	<b>1994 US WEST COMPANY PROPOSALS</b>	<b>1992-94 US WEST COMPANY PROPOSALS</b>
2121	<b>Buildings</b>	27-49	37.7	37.4	39.1
2124	<b>General Purpose Computers</b>	6	6.4	6.1	5.9
2212	<b>Digital Switch</b>	10	9.1	9.1	11.2
2232	<b>Digital Circuit</b>	10	9.6	9.9	9.9
2421	<b>Aerial Copper Cable</b>	15	15.9	16.0	17.3
2422	<b>Underground Copper Cable</b>	15	19.3	17.4	20.1
2423	<b>Buried Copper Cable</b>	20	21.4	19.7	22.0
	<b>Fiber Cable</b>	30	16.5	17.0	20.1

Note: Average service life from company proposals is a weighted average over all US West states, with investment as the weights. US West states and the year of their company proposals are as follows: 1994 (AZ, CO, NM, UT, WY), 1993 (ID, MT, OR, WA), 1992 (IA, MN, NB, ND, SD). Fiber includes the accounts 2421, 22, 23, 24, & 26.

apparently not proposed to the FCC service lives for metallic cable as short as in their financial restatements. There are two exceptions to this general rule: NYNEX in New York and Ameritech. NYNEX in New York has proposed considerably longer lives for both underground metallic cable and digital switching than the service lives it has proposed in other states (see Table 19). Although the proposed service lives for other NYNEX states are not that different from the service lives listed in NYNEX's financial statements, the NYNEX--New York service lives are considerably higher. Moreover, NYNEX--New York's proposed service lives for digital switching and underground cable are the highest of the five RBOCs, with the exception of Ameritech for digital switching. Ameritech's service lives in the financial restatements are substantially shorter than they have proposed to the FCC, and they are also far shorter than the lives proposed for financial restatement and FCC purposes by the other five RBOCs. Thus the change in depreciable asset lives claimed by the RBOCs when restating their financial books are (more often than not) consistent with the service lives they have proposed to the FCC. There is certainly no consistent support in these restatements for shorter asset lives than the RBOCs are proposing to the FCC. Ameritech is the outlier, and its financial statement provides no explanation for why its proposed service lives are so different from its own proposals to the FCC and from the service lives used by the other RBOCs for financial restatement.

## **Conclusion**

RBOC complaints about inappropriate regulatory depreciation policies are grossly overstated. From the standpoint of "fairness" to the LECs, rates based on economic cost (which are substantially below current rates by as much as \$138 per line per year)<sup>33</sup> would only have to be supplemented by a very small adjustment (\$11-12 per line annually over 5 years, if done with a special amortization) to account for possible underdepreciation.<sup>34</sup> Moreover, underdepreciation does not provide a rationale for universal service taxes on new entrants to local telephone service. Finally, the RBOCs' profits are not overstated due to regulators' depreciation policies.

The vast majority of the small difference between RBOC-based and FCC-based estimates of the reserve deficit appears to be due to different assumptions about appropriate retirement of subscriber metallic cable. To the extent such replacement is not necessary for basic local and access service, no additional depreciation expense should be included in the stand-alone cost and price of those services. The FCC's reserve deficit is roughly 33-50% accounted for by subscriber

---

<sup>33</sup> The SPR study estimates that toll and access revenues are priced \$20 billion above cost. The Hatfield Associates' estimate of universal service cost, \$4 billion, should be subtracted from this figure to obtain the actual amount by which overpricing of these LEC services is not contributing to a subsidy necessary for universal service. The resulting \$16 billion figure amounts to \$138/year on a per subscriber basis.

<sup>34</sup> Adding the FCC's 1994 reserve deficit of \$3.2 billion to the \$3.0 billion adjustment for state depreciation reserves yields a combined total of \$6.2 billion to be recovered. On a five year amortization, that amounts to \$1.24 billion per year. The RBOCs have a total of 115,281,227 access lines, so the annual amount per line is \$10.76. If one does the same calculation based on the FCC-based reserve deficit for 1995, the annual charge per line would be about \$12.40. To get this number, the FCC-based reserve deficit (\$2.07 billion) for the RBOC operations represeted in 1995 was doubled, since those operations accounted for about one-half the RBOCs' total gross plant.

metallic cable. To the extent that recent RBOC retirements or planned retirements of subscriber metallic cable are motivated by a desire to provide non-basic services, the FCC's reserve deficit will be too high. That is, the deficit would then be partially based on retirements or planned retirements that would not be undertaken by a company providing only traditional basic services. Thus, basing the reserve deficiency on the FCC's prescribed parameters may overstate the true adjustment necessary to correct for underdepreciation of subscriber metallic cable in the past. Since the bulk of the RBOCs' claim for a higher reserve deficit appears accounted for by subscriber metallic cable, there is little reason to increase the depreciation deficiency for a stand alone, economically efficient, basic local telephone company. This is not to say that the RBOCs should not be allowed to replace subscriber metallic cable. They should be free to replace metal with fiber cable so long as the price of local and access service remains based on the costs of the stand-alone network without such replacements. At least one RBOC is candid that such a constraint may well make the investment uneconomic. It appears, then, that only by increasing basic local service prices can the investment be recovered.<sup>35</sup>

---

<sup>35</sup>See Reply of Bell Atlantic, Transmittal No. 741, In the Matter of The Bell Atlantic Telephone Companies Tariff FCC No. 10, Video Dialtone Service, March 6, 1995, pp. 10-11.